less than about 7, is gelled by a polymeric sulfonic acid. Although Applicants acknowledge that Wheeler may indeed teach a biliquid foam in a salt-containing aqueous phase, it does not anywhere disclose the use of a polymeric sulfonic acid as gellant. In fact, the Examiner has not even asserted that this element of the claims is disclosed in the Wheeler disclosure, as the "laundry list" of components noted by the Examiner does not anywhere mention a polymeric sulfonic acid. Although it is not expressly stated in the office action, if it is the Examiner's intention to imply that, because sulfonic acid based surfactants can be used in the Wheeler formulation in combination with preformed polymers, this combination would constitute a polymeric sulfonic acid, this is simply contrary to the laws of chemistry. Merely admixing compounds which individually contain either a polymer moiety or a sulfonate moiety unequivocally will not result in a formulation containing a polymeric sulfonic acid. Polymeric sulfonic acids are a distinct class of individual compounds not made by simple admixture of randomly selected compounds that may contain certain of the pertinent moieties. For a finding of anticipation, each and every element of the claimed invention must be found within a single prior art reference. *In re Paulsen*, 31 USPQ2d 1671 (Fed.Cir. 1994). Therefore, in the absence of any teaching in Wheeler of an actual polymeric sulfonic acid gelling agent, rather than isolated sulfonate and polymer moieties, then the claims in question , there can be no holding of anticipation, and withdrawal of this rejection is therefore respectfully requested.

II. Rejection under 35 USC §103

Claims 1 and 3-11 have been rejected as being unpatentable over Wheeler et al. and Collin et al. In particular, the office action states, in pertinent part, as follows:

> Wheeler et al. teaches pharmaceutical and cosmetic composition comprising bi-liquid foam which further comprises active ingredients, silicone oil, sulfonate salts, surfactants and gelling agents. Collin et al. teaches cosmetic composition comprising salicylic acid active ingredient, silicone oil and gelling agents in an oil-in-water emulsion. Collin et al. also teaches that the salicylic acid stabilizes oil-in-water emulsions.
>
> At the time of the invention, it would have been obvious to one having ordinary skill in the art and one motivated to prepare the composition of Wheeler et al to use the teachings of Wheeler et al. and incorporate the salicylic acid of Collin et al. wherein the salicylic acid is the active ingredient and further stabilizes the bi-liquid foam.

Before addressing the merits of the rejection, Applicants wish to briefly summarize the nature of the present invention. The compositions of the invention are gelled aqueous compositions; more specifically, the compositions contain a salt-containing, gelled aqueous phase in which is dispersed a biliquid foam. The compositions of the invention have a pH of less than about 7, and the aqueous phase is gelled by a polymeric sulfonic acid.

The compositions of the invention have a number of unique features. First, they are not standard oil-in-water emulsions, but rather are biliquid foams dispersed in an aqueous gel. As noted in the present specification, it is very to obtain a stable dispersion of the biliquid foam in a gelled aqueous phase when there are substantial quantities of electrolytes present, because their presence interferes with proper gelling when using standard gelling agents. However, the presence of acidic components, which give rise to these electrolytes in solution, is often highly desirable in cosmetic and pharmaceutical compositions, and one is thus faced with the dilemma of how to employ the biliquid foam/aqueous gel vehicle with acidic components. Applicants have found, unexpectedly, that one particular type of gelling agent, namely, a polymeric sulfonic acid, unlike other gelling agents, is capable of permitting a stable dispersion of the biliquid foam even at low pH, in the presence of substantial quantities of electrolytes.

A careful review of the two cited references will show that neither the present invention, nor the unexpected results achieved thereby, is taught or suggested by them. Wheeler does teach the general concept of a biliquid foam dispersed in an aqueous gel; however, this reference does not address the issue of incorporation of acidic components into the formulation. In other words, the problem encountered, and solved by the present invention is not even recognized in this document. While the reference does disclose a number of gelling agents that can be used in the dispersion, it discloses standard gellants which do not provide a very stable dispersion in the presence of electrolytes. Wheeler does not disclose the use of a polymeric sulfonic acid as gellant, which in addition to the low pH and presence of electrolytes, is a crucial component of the present compositions.

Collin does not fill in the missing pieces from the Wheeler disclosure. First, it is not a fair statement to say that Collin teaches that salicylic acid added to an oil-in-water emulsion stabilizes the emulsion. The authors of the Collin document only claim to have made salicylic acid derivatives which are said to be more stable in the emulsion than the free acid counterparts. Second, the Collin reference does not relate to a biliquid foam dispersion in a gelled aqueous phase; rather, the emulsion is a standard oil-in-water emulsion. Therefore, even if the reference could be read as suggesting that any derivative of salicylic acid could aid in stabilizing an oil-in-water emulsion, one skilled in the art would not apply this teaching to the quite different biliquid foam dispersion of the present invention, and even if they did, they would get an unstable product without the addition of the proper gellant. In addition, to the extent any thickeners or gellants are mentioned at all in the document, they are of the type (e.g., carbomer in examples 3 and 4) which Applicants have observed, and have expressly stated in the specification, are not effective in gelling an acidic, salt-containing aqueous phase of a biliquid foam dispersion. There is no mention, or even a suggestion, of the crucial gellant of the present invention, in either Wheeler or Collin. Since neither document either recognizes the problem, let alone the solution, of how to stably gel an acidic aqueous phase of a biliquid foam dispersion, then there is no suggestion of the present invention to

be found in either of the documents, alone or in combination. It is therefore requested that the rejection of claims 1 and 3-11 under 35 USC 103 be reconsidered and withdrawn.

Claims 1, 2 and 12-21 have been rejected under 35 USC 103(a) as being unpatentable over Wheeler et al. and Collin et al. in view of the Clariant product brochure. The rejection states as follows, in pertinent part:

> Wheeler et al. and Collin et al. are discussed in the preceding rejection. Although, Wheeler et al. suggests ammonium sulfonate salt gelling agent, and Wheeler et al. and Collin et al. both teach the incorporation of a gelling agent into the formulation, they failed to teach the specific gelling agent Aristoflex AVC or copolymer of polyacryldimethyltauramide and vinylformamide. But the Clariant product brochure teaches Aristoflex AVC or copolymer of polyacryldimethyltauramide and vinylformamide gelling agent for aqueous systems and thickening agent for oil-in-water emulsions. It would have been obvious to one having ordinary skill in the art at the time the invention was made and one motivated to prepare the composition of Wheeler et al. and Collin et al. to use the commercial gelling disclosed in the Clariant product brochure in the composition of the prior art.

Applicants respectfully disagree with the Examiner's analysis of the references cited, and therefore, the premise of the rejection. First, it must be noted that while Wheeler may in fact suggest the use of an ammonium sulfonate salt in the formulations disclosed there, this is not what is claimed in the present application. The present claims are directed to a composition containing a polymeric sulfonic acid, not an ammonium sulfonate salt. Moreover, lest there be any assumption of functional equivalence of the present polymeric sulfonic acid and the ammonium sulfonate salt cited by the Examiner in Wheeler, Applicants note that the sulfonate salt is not taught by Wheeler as being a gelling agent, but as being a surfactant. While it is also true that both Wheeler and Collin may teach the use of various other gelling agents in their formulations, as the Examiner recognizes neither teaches the polymeric sulfonic acid gelling agent of the present invention, but rather both teach the traditional gelling agents that are normally used to gel or thicken standard aqueous phases. However, as Applicants have noted in the specification, traditional gellants have not been found to be suitable for thickening a composition incorporating a biliquid foam and having pH of less that 7, because of the presence of substantial quantities of salt in such compositions. Neither Wheeler nor Collin recognize this problem, let alone provide any solution for it.

While the Clariant brochure does suggest the use of the Aristoflex® AVC polymer to gel water-based systems, it does not address the issue of low pH systems or biliquid foam containing systems. While it may arguably be obvious to try to use this polymer to gel the aqueous phase of Applicants' composition, this is not the legal standard by which obviousness is determined; rather, there must be a reasonable expectation of success in achieving the goal. *In re O'Farrell*, 7 USPQ 2d 1673(Fed.Cir. 1988.

This cannot be found in the present situation. Again, as has been noted in the specification, traditional aqueous phase gellants are not expected to perform well in the presence of significant quantities of salts. Therefore, there is no reasonable expectation that the polymeric sulfonic acid gellant would perform any differently than traditional gellants, and the Clariant brochure provides no information which would increase this expectation. Thus, the observed results, namely that this particular gellant was able to gel an aqueous phase of a biliquid foam-containing composition without loss of the desired aesthetic qualities, were quite unexpected in view of the cited art and the general knowledge in the art, given the unacceptable performance observed with other types of aqueous phase gellants. Since these results are truly unexpected, then this overcomes any *prima facie* case of obviousness that may have been established. For this reason, withdrawal of the rejection under 35 USC 103 is respectfully requested.

CONCLUSION

The present claims are believed to be in condition for allowance, and prompt issuance of a Notice of Allowance is respectfully solicited. The Examiner is encouraged to contact the undersigned by telephone if it is believed that discussion will resolve any outstanding issues.

Respectfully submitted,

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